Agencies managing statewide longitudinal data systems (SLDSs) rely on unique data keys to identify individual records within their systems. For higher education institutions and workforce agencies, Social Security Numbers (SSNs) often provide this key. However, in many states K12 schools are prohibited from collecting student SSNs and generally use demographic information such as name, date of birth, and gender to identify students. Without a common unique identifier, it can be difficult to match records for the same individual across multiple systems to obtain truly longitudinal information.

To address this challenge, the Idaho Department of Labor forged a partnership with the state's Transportation Department to obtain driver's license records from the Division of Motor Vehicles (DMV). These records contain SSNs as well as demographic information and cover a significant portion of the state's adult population. This publication outlines Idaho's process for sharing DMV records, how the Department of Labor uses those records to link information across data systems, and how SLDS partners safeguard individual privacy while sharing data among several state agencies.

Obtaining DMV Records

In the process of applying for a Workforce Data Quality Initiative (WDQI) grant to construct a labor longitudinal data system, the Idaho Department of Labor realized the potential benefits of linking its data system to as many sources as possible, including the SLDSs being developed by the state's education agencies. After brainstorming possible methods of linking the data systems and learning about a similar effort in Wyoming, the department decided to reach out to the Idaho Transportation Department for access to driver's license records maintained by the DMV.

The departments of Labor and Transportation had already exchanged data for efforts such as transportation construction and improvement projects as well as tracking migration in and out of Idaho based on in- and out-of-state driver's license applications. When proposing this new exchange, the project leaders at Labor initially approached their counterparts in Transportation to share their ideas about the project and let them know a formal request for the DMV records would be forthcoming.

Even with the history of data sharing between the two departments, conversations about the project and drawing up an agreement to release the DMV records took about two years. During that time, the Department of Labor laid out its plans for using the data, explained how the longitudinal data system would enhance understanding of labor issues and quality of life in Idaho, and addressed privacy concerns. Although both agencies

Identifiing information used by Idaho agencies:

K12 Schools
- Name
- Date of Birth
- Gender

Department of Labor
- Social Security Number

Transportation Department/ Division of Motor Vehicles
- Social Security Number
- Name
- Date of Birth
- Gender

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use and store SSNs, the Transportation Department had its own security requirements from the federal Social Security Administration and needed to ensure Labor's use of the data would be consistent with those requirements. The process was also slowed by a change in directorship at the Transportation Department. During that transition, project leaders at Labor relied on their colleagues at Transportation to advocate for the project with the new director.

In 2012 the two departments signed a memorandum of understanding (MOU) formalizing the sharing of DMV records. The memorandum was carefully crafted and vetted by legal teams at both agencies to address the following considerations:

- *Authority for data use.* In Idaho, state statutes allow the Transportation Department to share data—including personal information—with other government agencies intending to use that data for the benefit of the state. The MOU cited both agencies' legal authority for sharing and using the information contained in the DMV records.
- *How the data will be used.* Throughout its discussions with the Transportation Department, the Department of Labor emphasized the insight into job creation, earnings, economic wellbeing, and overall quality of life its longitudinal data system could provide when linked to education data using the DMV records. These benefits and how the data system would realize them were stated in the MOU.
- *Roles and responsibilities.* The MOU outlined the specific data the Transportation Department would provide to the Department of Labor, as well as how Labor would receive, use, and store the data. It specified that only authorized individuals would have access to the data, cited federal regulations for data security, and granted the Transportation Department the ability to monitor Labor's use and storage of the records it provided.

With the MOU in place, the Transportation Department provided the Department of Labor with all current driver's license records. After this initial download, Transportation began sending a file with all new and updated records to Labor on a quarterly basis via an FTP site. The quarterly updates are generated through an automated query of DMV records at minimal cost to the Transportation Department.

How DMV Records Help Link Data Across Systems

The driver's license records that the Department of Labor receives from the DMV include individuals' SSNs, full names, genders, dates of birth, dates of last record update, and up to five alternate names covering marriages, spelling corrections, or other changes.

First line of the memorandum of understanding between the Idaho Department of Labor and the Idaho Transportation Department:

"It is the purpose of this agreement to provide for disclosure of information between the Idaho Department of Labor and the Idaho Transportation Department to assist the Idaho Department of Labor to improve Social Security Number matching capabilities between the Idaho Department of Labor and collaborative entities using triangulation data matching protocols to measure workforce outcomes and ultimately improve state systems and programs designed to increase earnings, economic wellbeing, and the quality of life for Idaho residents."

After Labor receives these records, an automated process matches the DMV information to existing Labor records based on SSNs. By automating this and other data management processes, the department hopes to reduce staff time involved in maintenance and lay the groundwork for a system that will be sustainable once the WDQI and SLDS grants have ended.

Linking information from Labor's longitudinal data system with the state's educational data systems is a multi-step process involving the Idaho State Department of Education (SDE) and the State Board of Education (SBOE) as well as the Department of Labor, with each agency maintaining control and responsibility for its own data. This process is outlined in Figure 1 (next page).

Student data collected by the SDE and postsecondary institutions are contributed to the SBOE, which manages the state's developing P-20 SLDS. The SDE and the SBOE both use a common education unique identifier (EDUID) to identify the student records within their systems.

To match student records to workforce records maintained by the Department of Labor, the SBOE assigns each record a temporary labor exchange identifier (LABXID) and sends that identifier along with the student's name, gender, and date of birth to the Department of Labor. Because Labor uses SSNs rather than demographic data to identify individuals in its system, it runs the SBOE records through the Name Resolution Engine, a probabilistic matching algorithm that identifies likely matches between the SBOE records and existing Labor records using the SSNs and demographic data provided by the DMV. The algorithm compares names, dates of birth, and genders between the two sets of records and generates a score for matching criteria. In addition to finding identical records, the algorithm can identify likely name matches based on nicknames, alternate spellings, possible data-entry mistakes, and cultural variations. Manual checking is only required
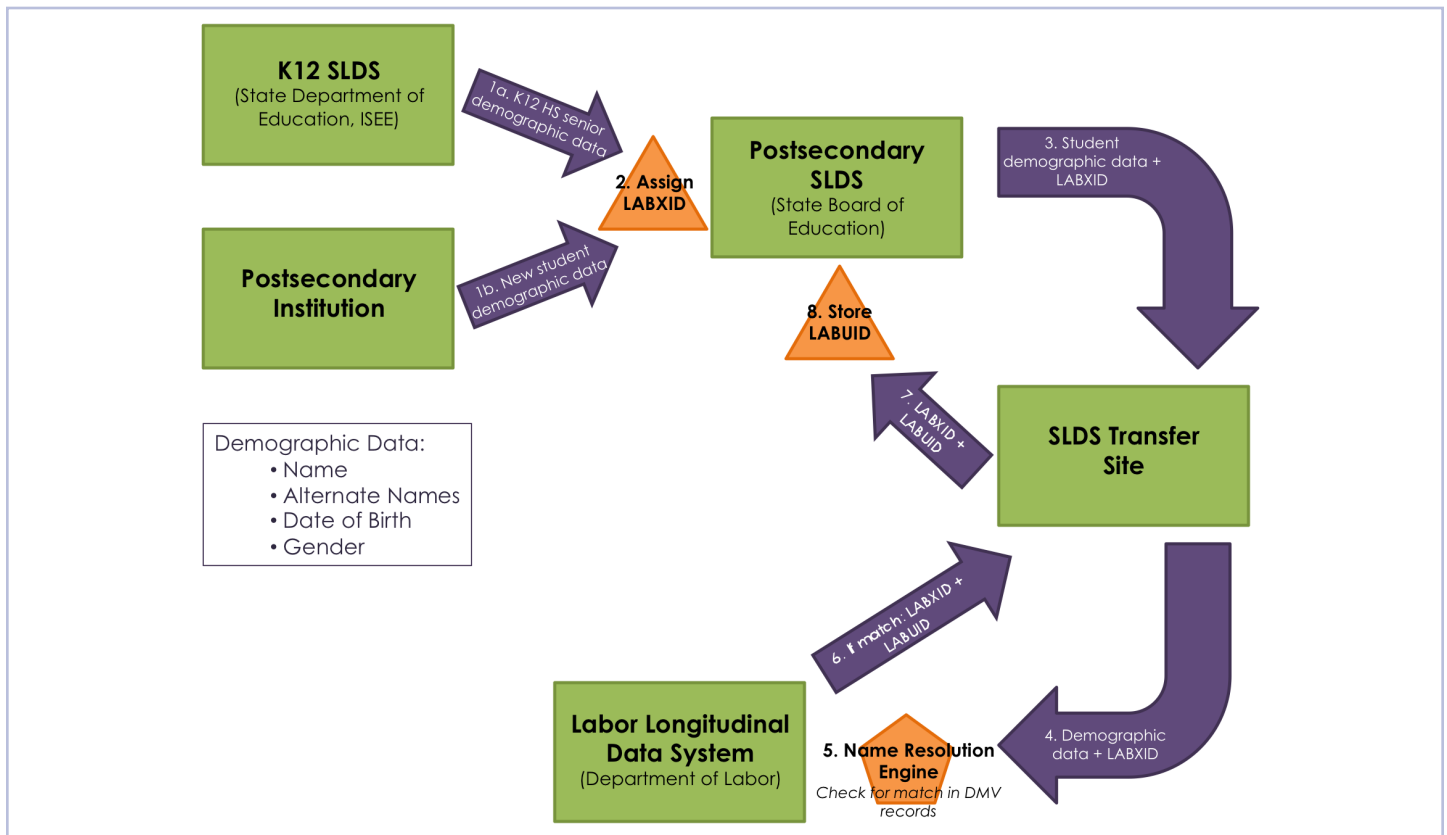
Figure 1. Idaho's Data Exchange Process

for possible matches that do not score high enough in the algorithm to be matched automatically.

Once the Department of Labor locates the data in its system that initially matches the SBOE records, it assigns a new labor unique identifier (LABUID) to each record and only returns the LABUID and LABXID for matched records during the initial matching process to the SBOE. No demographic information is returned to SBOE at this time to limit the number of times any personally identifiable information is transferred between the two agencies. Both Labor and the SBOE then permanently store the LABUID for each record, eliminating the need to transfer SSNs, names, or other personal information for those records in the future.

After this initial matching process, requests for information among the agencies are handled using the assigned identifiers for each record. For example, if the SDE wants information about employment and earnings for students who graduated from Idaho public high schools but did not attend a college or university, it submits the EDUIDs for those students to the SBOE. The SBOE looks up the corresponding LABUIDs for the requested records and sends the LABUIDs to the Department of Labor. Labor uses the LABUIDs to locate the relevant records in its data system and returns the information requested to the SBOE using the LABUID as the identifier. The SBOE then replaces the LABUID with the EDUID before sending the data to the SDE.

Safeguarding Data Privacy

Idaho's segmented approach to data sharing allows each agency to retain control over the sensitive personal information in its records and safeguard data according to its own needs and requirements. The Department of Labor never sees the EDUIDs that form the primary data key in the education data systems, and the SBOE never sees the SSNs stored by the Department of Labor. As a result, the chance that someone with information from one agency's system could gain access to records in another without authorization is minimized. Where possible, the agencies exchange aggregate data rather than individual records, and all data transfers require pre-approval from a data governance body.

Idaho is still in the testing phase of exchanging data files under this system. The initial import of DMV records into the Department of Labor's data system resulted in a 90 percent match between driver's license records and Labor's wage records. Project leaders anticipate a match rate of about 85 percent when Labor data is linked with education records.

Additional Resources

Centralized vs. Federated: State Approaches to P-20W Data Systems
http://nces.ed.gov/programs/slds/pdf/federated_centralized_print.pdf

Idaho Department of Labor
http://labor.idaho.gov/dnn/Default.aspx?alias=labor.idaho.gov/dnn/idl

Identity Management Approaches: Protecting Access while Serving Multiple Stakeholders
http://nces.ed.gov/programs/slds/pdf/webinar_id-mgmt.pdf

SLDS Best Practices Brief: P-20W Data Governance
http://nces.ed.gov/programs/slds/pdf/brief4_P_20W_DG.pdf

SLDS Spotlight: Arkansas's Approaches to Identity Management
http://nces.ed.gov/programs/slds/pdf/AR_spotlight.pdf